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PATENT TRADEMARK OFFICE

Docket No.: 0366/1E150US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Stanley DUNN

Serial No: 09/888,636

Group Art Unit: 2834

Filed: January 22, 2002

Examiner: Dang D. Le

Confirmation No.: 7685

For: MACHINE WITH CUP-SHAPED ARMATURE AND AIR GAP

AMENDMENT MARK-UP SHEET FOR AMENDMENT RESPONSIVE TO
OFFICE ACTION OF JUNE 20, 2002

Commissioner of Patents and Trademarks
Washington DC 20231

In the Claims:

Please rewrite Claim 1 in amended form to read as follows:

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1. (Amended) An electro-mechanical machine, comprising:
a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, a portion of the air gap remote from the axis extending in a direction lateral to the remainder of the air gap, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis, the flux in said portion being substantially perpendicular to the direction of extension of the portion; and

a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;

the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation.

Please rewrite Claims 6 and 8 in independent Form to read as follows:

6. An electro-mechanical machine, comprising:
a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis;

a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;

the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation; and

[The machine of claim 1 comprising] a first subset of C coils circularly disposed on one of two angularly disposed surfaces of said electrical assembly and a second subset of C coils cylindrically disposed on the other of said two surfaces, each coil in the first subset being axially aligned with a corresponding coil in the second subset.

8. An electro-mechanical machine, comprising:

a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis;

a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;

the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation; and

[The machine of claim 1 wherein] said field producing assembly comprises N circumferentially spaced magnet subassemblies disposed on one side of said air gap, each magnet subassembly being generally L-shaped in a cross-section taken through said axis and being magnetically polarized opposite to a next adjacent magnet subassembly in a direction normal to the air gap.

Please rewrite Claim 18 in amended form to read as follows:

18. (Amended) The machine of claim 2 wherein each [roll] coil extends over two angularly disposed surfaces of said electrical assembly.

Please rewrite Claim 19 in independent form to read as follows:

19. An electro-mechanical machine, comprising:
a field producing assembly having a cup-shaped air gap which is circumferentially disposed about an axis of rotation, the field producing assembly producing a circumferential distribution of magnetic flux in the cup-shaped air gap having N periodic extremes of flux density about the axis;
a cup-shaped electrical assembly disposed in the air gap and including a circular array of C non-overlapping coils on one of an inner and outer face of the electrical assembly;
the field producing and electrical assemblies being mounted so as to be relatively rotatable about said axis of rotation; and

a circular array of C non-overlapping coils on each of an inner and outer face of the electrical assembly with the coils on one face being angularly offset from the coils on the other face; and

[The machine of claim 2 comprising] a first subset of C coils circularly disposed on one of two angularly disposed surfaces of said electrical assembly and a second subset of C coils cylindrically disposed on the other of said two surfaces, each coil in the first subset being axially aligned with a corresponding coil in the second subset.